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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/035,165	01/04/2002	Naoki Yazawa	Q67946	1762

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EXAMINER

HARPER, HOLLY R

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 03/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/035,165

Applicant(s)

YAZAWA, NAOKI

Examiner

Holly R. Harper

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: .

DETAILED ACTION

Response to Amendment

The Amendment, filed on 10/9/03, has been entered and acknowledged by the Examiner.

Claims 2-6 have been amended.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Shioya et al. (USPN 6,091,382).

In regard to claim 1, the Shioya reference discloses an organic EL display (Column 5, Lines 62-63) with a transparent substrate (Figure 29, Element 12), a transparent electrode (Figure 29, Element 13), an EL layer (Figure 29, Element 16), a back electrode (Figure 29, Element 17), and a half mirror disposed on the outside of the substrate (Figure 29, Element 293).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shioya et al. (USPN 6,091,382).

In regard to claim 4, the Shioya reference discloses that the thickness of the substrate is between .1 and .2 mm (Column 14, Lines 20-22). Shioya does specify the dot pitch but it is known in organic EL displays that the dot pitch is between 15 to 40 microns. Therefore, the Shioya reference discloses a thickness of the substrate that makes the perpendicular distance between the organic EL layer and the half mirror to be greater than the dot pitch of the display.

5. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Senoo et al. (USPN 6,517,957) in view of Kawai (USPN 4,50,128).

In regard to claim 1, the Senoo reference discloses an organic EL display with a transparent substrate (Figure 3, Element 1), a transparent electrode (Figure 3, Element 2), an organic EL layer (Figure 3, Element 3), and a back electrode (Figure 3, Element 4). The Senoo reference does not disclose a half mirror. The Kawai reference teaches that a half mirror is placed on the back of a substrate, on the opposite side from the viewer (Figure 2, Element 11). The mirror is placed behind the transparent substrate to enhance light transmission and achieve a bright display. Thus, it would have been obvious at the time the invention was made to a person

Art Unit: 2879

having ordinary skills in the art to incorporate a half mirror on the back of the transparent substrate, as taught by Kawai, to enhance light transmission.

In regard to claim 2, the Kawai reference discloses that the mirror layer is made of metal (Column 4, Lines 12-15) and by being placed on the outer surface of the substrate (Figure 2, Element 11) will protect the display.

In regard to claim 3, the Senoo reference discloses that a binding resin is used to attach each layer on the substrate (Column 65, Line 65 – Column 66, Line 5). Therefore, a resin would be used to attach the mirror layer, taught by Kawai, to the substrate.

In regard to claims 4-6, the Senoo in view of Kawai reference does not specify the thickness of the substrate or the dot pitch. However, it is known that the dot pitch in organic EL displays is between 15 to 40 microns and that a glass substrate is normally 1mm thick. Therefore, the Senoo in view of Kawai reference has a thickness of the substrate that makes the perpendicular distance between the organic EL layer and the half mirror to be greater than the dot pitch of the display.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sakaguchi et al. (USPN 6,303,255) discloses an organic EL display with a dot pitch of 40 microns.

Egusa et al. (USPN 5,343,050) discloses an organic EL display with a dot pitch of 15 microns.

Art Unit: 2879

Duggal et al. (USPN 6,515,417) discloses that an epoxy is used to mount components to the substrate of an organic EL display.

Response to Arguments

7. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Harper whose telephone number is (571) 272-2453. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Holly Harper
Patent Examiner
Art Unit 2879



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